

## SOME ODYNERINAE OF THE SOUTHWEST UNITED STATES

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### *Leptochilus cratocerus* n. sp.

Black, the clypeus, labrum, mandibles (except the apex which is rufous), a small spot on the front, the lower edge of the eye incision, a short line behind the eyes above, a line on the base of the thorax, dilated irregularly on to the propleurae, a small spot on the sides of the scutellum at the base, post-scutellum, an irregular spot narrowed behind on the sides of the metanotum in the middle, a large conical spot below the tegulae, and broad bands on the bases of the basal six abdominal segments, bright lemon yellow; the ventral segments are also edged with the same color, the mark on the second being wider and trilobate. Legs bright lemon yellow, the base of coxae in front, entirely behind, the trochanters, and the base of the femora broadly, the posterior to near the apex above and below, and the middle femora beyond the middle above, black. Antennal scape lemon yellow, black above, the flagellum brownish red, black on top. Wings hyaline, the costa and stigma dark fulvous, the nervures black. Male—Length 7 mm.

Ormsby county, Nevada, July (Baker).

Antennae long, stouter than usual, especially toward the apex, the last joint straight above, roundly narrowed to a blunt point below. Clypeus sparsely punctured, covered with silvery pile; the apex transverse, broad, as wide as the sides which are straight and oblique. Front and vertex closely rugosely punctured, thickly covered with long pale fuscous hair. Temples roundly obliquely narrowed; the occiput transverse. Thorax clearly longer than wide, the base transverse, with bluntly projecting lateral angles, the apex narrowed, the sides broadly rounded. Pro- and mesothorax strongly closely punctured; the postscutellum large, with a rounded oblique slope, the apex transverse. Metanotum deeply depressed in the middle where it is finely closely striated, the rest distinctly punctured above, sparsely punctured and obscurely striated below. Metapleurae shining, aciculated. First abdominal segment cup-shaped, longer than it is wide at the apex, gradually narrowed from the apex to the base, somewhat strongly but not closely punctured; the second segment is about one-fourth longer than wide, but not much narrowed at the base, sparsely weakly punctured. The trophi are very long, the maxillae reaching slightly beyond the apex of thorax. The basal two joints of the maxillary palpi are clearly thicker than the others, which are long and slender; the penultimate joint of the labial palpi is very long and slightly nodose at the apex, the last is about six times longer than wide. Mandibles long, with two teeth behind the apical, the posterior being less distinct than the second. Labrum large, projecting, longer than wide, its apex rounded.

Saussure (Syn. Am. Wasps, 367) describes two species of *Leptochilus*: *fallax* Sauss., of doubtful origin, and *ornatus* Sauss. from Carolina. The

former is omitted by Mr. Cresson in his Catalogue (Trans. Am. Ent. Supp. 1887, 288), while *ornatus* he refers to *Odynerus*. As the species are very easily recognized, *Leptochilus* might as well be adopted as a generic group.

***Pterochilus bakeri* n. sp.**

Black, the clypeus except a small irregular spot in the center; mandibles except apex, a narrow line on the lower edge of the eye incision, a broader one obliquely narrowed below on the outer orbits, the upper part of the thorax to near the apex, where it is broad and incised, tegulae, two large marks on the scutellum, postsutellum, the sides of metanotum broadly, the marks not reaching to the lower edge, a squarish mark on the base of the mesopleurae rounded below and reaching beyond the middle, a similar but longer mark immediately below it, and the abdomen for the greater part, lemon yellow; the basal slope of the first abdominal segment the mark continued beyond as a narrower rounded projection, a larger similar mark on the second, narrow rounded bands on the base of the second to fifth, and the basal half of the sixth all around, black. Legs of a paler yellow, the coxae behind, the hind femora to near the apex, the four anterior femora at the base all around, more broadly behind, and the intermediate to beyond the middle, black. Antennal scape yellow, black above, the flagellum black, reddish brown below. Wings hyaline, suffused with fulvous, the apex slightly violaceous, the costa and stigma fulvous. Female—Length 9 mm. Claremont, California. (Baker.)

Clypeus as broad as long, sparsely punctured, the apex somewhat broad, transverse, margined. Head and thorax closely but not strongly punctured. Base of thorax transverse, the sides slightly but distinctly bluntly projecting, the sides at the apex broadly rounded, apical half of mesonotum with a longitudinal furrow bordering the middle. Abdomen closely coarsely punctured, the second segment square, the base of the second ventral segment has a band, which bifurcates at the outer edges the outer fork the larger.

The apex of the clypeus is broader than it is in *luteicollis* Cam.; in that species the lower mark on the mesopleurae is narrower, more irregular and obliquely sloped, there is a yellow mark on the metapleurae, and the marks on the basal two abdominal segments are differently shaped, *e. g.*, they are incised in the middle.

***Symmorphus hornii* n. sp.**

Black, a small, semi-circular mark on the top of the clypeus, a small one over the antennae, a triangular spot on the sides of the pronotum slightly longer than that on the clypeus, two spots wider than long, and narrowed on the inner side on the scutellum, an irregular spot narrowed below under the tegulae, a line of uniform width on the apices of the first and second abdominal segments, a narrow interrupted one on the middle of the third, a broader one (not much narrower than those on the basal segments) on the fourth, and an irregular line curved and laterally dilated, on the underside of the third, pale whitish yellow. Tibiae, except at the apex, testaceous. Wings, hyaline, suffused with violaceous, the base tinged with dark testaceous, the stigma and nervures black. Female—Length 10 mm. Gunnison, Colorado. (Baker.)

A longish insect, narrow compared with the width, the thorax more than twice longer than wide, the base narrowed transverse, the sides distinctly projecting. Parapsidal furrows complete, but shallow. Scutellum with a distinct furrow down the apical three-fourths. Apex of postscutellum rounded, almost transverse. Metanotum furrowed down the center, the furrow widened below, keeled stoutly in the middle, the sides with a distinct edge. Propleurae punctured above, the rest strongly closely striated; mesopleurae with scattered punctures, the apex above closely rugosely punctured; metapleurae obscurely finely striated at the apex. First abdominal segment distinctly longer than it is wide at the apex, without a distinct neck at the base, it is narrower than the second which is clearly longer than wide, and is narrowed at the base, smooth and shining. Clypeus pyriform, shining, weakly sparsely punctured, its apex with a wide shallow incision. The transverse keel on the base of the abdomen is weak, the apical longitudinal furrow deep and clearly defined. Pubescence short, sparse and pale.

Belongs to Saussure's division a. It is not unlike *S. trisculatus* Cam., but that species has the markings luteous, not white, the stigma testaceous, the wings hyaline, the first abdominal segment with a distinct narrowed neck, and the propleurae are punctured, not regularly striated as in the present species.

#### **Odynerus annulatus Say.**

This species appears to be fairly common and widely distributed, judging by the number of specimens in Prof. Baker's collection, also it is a very variable one. The varieties seem to run into local races. The variety from Fedor, Texas, (Birkmann) is black, with the following parts rufous: Clypeus except above, a broad line on the upper half of the outer orbits, pronotum except at the base, tegulae, scutellum, sides of metanotum and the parts round the black central spot on first abdominal segment; yellow are the under side of the antennal scape, clypeus, base of mandibles, the frontal spot, base of pronotum, the postscutellum, sides and apex of first abdominal segment broadly, and the apices of the second and third. Some of the red markings may be yellow and vice versa, *e. g.*, the clypeus, and the sides of metanotum may be yellow or red; the scutellum may rarely be black; there may be a rufous spot on the sides of the second abdominal segment at the base; in most the postscutellum is yellow; in all the wings are fuscous violaceous. This variety may be known as var. *birkmanni*.

The form from Prescott, Congress, and Phoenix, Arizona (Oslar), and from Berkeley, Colorado (Oslar), is smaller and has the yellow and red colors much more extended. The female has the head and thorax red, with the ocelli, the sides and base of mesonotum, and more or less of the pleurae and breasts black; the top of the clypeus, a line on the eye incision, a line on the center of the apex of pronotum, a large spot under the tegulae, sides of scutellum, postscutellum, and the sides of the metathorax broadly, bright lemon yellow; the abdomen is bright lemon yellow, with the bases of the first and second segments broadly red; the wings are almost hyaline, smoky violaceous along the anterior margin. The male of this variety has the front, vertex, occiput,

lower part of prothorax, mesothorax, middle of metanotum, and a more or less large spot on the center of the basal abdominal segments; the clypeus, a large semi-circular spot on the front, the eye incision, a spot under the tegulae, a spot on the sides of the scutellum, and the postscutellum, are yellow more or less tinged with rufous. The red mark on the base of the second abdominal segment is of irregular form and may be incised laterally at the middle and at the apex; there may be a square or triangular black mark in its middle; the basal half may be black with an enclosed transverse oval spot on the sides; the yellow apical band on the first segment may be dilated backwards at the sides. An example from Ormsby county, Nevada, has the upper part of the head, the thorax, except the apex of pronotum, a mark below the tegulae, one on the sides of the scutellum, the postscutellum, and the first and second segments of the abdomen (except at the sides), black. This variety may be known under the name *oslari*.

This is a very variable species and very confusing, owing to some of the varieties simulating other but distinct species. *O. orasus* Cam., for example, agrees with the last form that I have described, but may at once be known by the incised apex of its clypeus. *O. bradleyi* Cam., could be matched in color by one of the aberrations, but may be known by the apex of the clypeus not being transverse, and by the very different form of the antennae. *O. belti* Cam., from Nicaragua is very similar in coloration, but has the clypeus longer compared with the width, and otherwise differs in the middle of the metapleurae at the sides projecting into a distinct tooth.

Some of the forms are not unlike *Rhygchium dorsale* F., in coloration. Two characteristic features of the species are: the broad clypeus truncated at the apex in both sexes, and the form of the second abdominal segment, which is broader than long, its apex depressed, the depression widest in the middle and strongly punctured.

#### ***Odynerus sapelloensis* n. sp.**

Black, the clypeus except for a small black spot (broad and round above, narrowed beneath shortly below the middle), a mark over the antennae, a line on the base of the mandibles, a line on the base of the thorax, narrowed in the middle, an irregular oval mark (straight behind, rounded in front and narrowed), tegulae, base of postscutellum, two small irregular spots on the sides of the postscutellum, two small irregular spots on the sides of the metanotum, the apex of first abdominal segment (the sides of the apical half more broadly, the yellow projecting towards the center so that the black central part is narrower than the apical), the sides of the second segment from near the base (the yellow projecting into the central part at the base, the apex more narrowly), the greater part of the following segments, the apex of the second ventral and the greater part of the following except the last, sulphur yellow; the apex of the femora above, their lower part more broadly (especially the anterior), and the tibiae and tarsi, of a more rufous yellow, the rufous tint most distinct on the tarsi. Wings almost hyaline, clouded slightly with fulvous



in front, the radial cellule violaceous. Antennal scape yellow, black above. Female. Length 11-12 mm. Sapello Cañon and Las Vegas, New Mexico (Oslar).

Clypeus as wide as long, its apex transverse. Base of thorax transverse, the sides of the apex bluntly margined, the upper half more distinctly than the lower, the middle projecting into a slight blunt tooth. The puncturation on the head, pro, and mesothorax, is strong and close; the apex of the metanotum is closely finely obliquely striated, the metapleurae except at the base is closely somewhat strongly obliquely striated, the striae intermixed with punctures. Abdomen closely punctured, the apex of the second segment and the following much more coarsely than the rest; the first segment cup-shaped, the second slightly wider than long, its apex reflexed. The pubescence is dense and fuscous.

The male is smaller, its clypeus is entirely yellow and with a transverse apex, the whole being longer than wide; the markings on the abdomen are more irregular, e. g. the yellow oblique line on the second abdominal segment is almost enclosed, the black mark on the second ventral is divided on the sides by an oblique yellow line; the antennal hook is broad, thick, rounded, and slightly narrowed at the apex, reaching to the apex, of the penultimate; the legs have less black on the base, the coxae being yellow below, and the black on the femora shorter.

This species is allied to *O. arvensis* Sauss., that being larger with clypeus not entirely yellow below, the legs not broadly black at the base, the sides of the metanotum yellow above, and the sides of the second abdominal segment only yellow at the apex. It is not unlike some of the varieties of *O. annulatus* Say: that species may be separated by the broader more bluntly pointed clypeus, it having also the sides of the metanotum yellow at the base.

#### ***Odynerus deficiens* n. sp.**

Black, the head and thorax densely covered with long fuscous pubescence, the clypeus, mandibles except at apex, a mark over the antennae, a short one behind the eyes, a line on the base of thorax laterally not reaching to the middle of pronotum, tegulae except for a central spot, a spot below them, postscutellum, a mark on the sides of the metanotum above, a broad line on the apex of the first abdominal segment broadly dilated laterally to the top of apical slope, a wider one on the second widely dilated laterally to near the base where there is an oblique projection narrowed towards the inner side, broad lines on the other segments, the second ventral (except for a large wide black mark irregularly narrowed laterally in the middle on the basal three-fourths), the greater part of the third to fifth ventrals, and a mark in the center of the last, yellow. Legs yellow, the femora largely marked with black. Male. Length 10 mm. Prescott, Arizona (Oslar).

Clypeus pyriform, a little longer than wide, the apex depressed, not quite transverse, the sides slightly projecting. Base of thorax transverse, the sides not projecting, the apex transverse, the sides more strongly keeled above than below. Apex of postscutellum transverse. First abdominal segment cup-

shaped with a short neck, the second is, if anything, wider than long, narrowed at the base, the apex reflexed. Wings hyaline, tinged with violaceous; the basal nervures, costa and stigma, testaceous, the apical nervures blackish.

Allied to *O. sapelloensis* Cam., but that species may be known by the second abdominal segment being clearly longer than wide, by the yellow basal line being enclosed, not open, by the apical part of the black mark on the first abdominal segment being narrower and broader on the projecting sides, by the black mark on the second ventral segment being larger, having a larger more rounded incision on the sides, and the apex having a broad rounded incision.

***Odynerus viereckii* n. sp.**

Black, the clypeus, base of mandibles, a triangular frontal mark (the narrow end below and with a short pedicel), the eye incision, the greater part of the outer orbits, the basal half of pronotum, sides of scutellum, postscutellum, a broad conical spot below the tegulae, the sides of the first abdominal segment from the top of the basal slope, its apex more narrowly, the second segment except a large broad mark on the center of the basal two-thirds (this mark has the basal half obliquely narrowed, the narrowed apical part of equal width), and all the rest of the abdomen pale orange yellow. Legs fulvous, the underside of the coxae pale yellow, the upper black, the apex of the femora and of the tibiae in front, yellow. Antennal scape rufous. The center of the clypeus tinged with rufous; the apical half of pronotum, the center of the scutellum broadly, the upper edges of the sides of metanotum broadly, and a broad band bordering the sides of the black spots on the center of the first and second abdominal segments, rufous. Wings fulvo-hyaline, the apex slightly infuscated, the nervures blackish, the costa and stigma fulvous. Female. Length 12 mm. Claremont, California (Baker).

Clypeus as wide as long, the upper half strongly but not closely punctured, the lower flat with scattered punctures; the apex broad, transverse, furrowed behind. At the end of the vertex in the center, there is a smooth transverse curved space roundly dilated behind, and with a curved transverse depression on the hinder half. Base of thorax transverse, the apex laterally becomes gradually widened from the top and bottom to the middle; the center of the apex is roundly depressed and closely transversely striated. The puncturation is strong and close, and on the pleurae running into reticulations. First abdominal segment smooth, cup-shaped, the second slightly longer than wide, sparsely weakly punctured, the apex strongly punctured with a smooth reflexed border, the other segments are much more coarsely punctured, the apex of the third is strongly reflexed.

This species might be taken for a form of *annulatus* but may readily be known by the reflexed borders of the second and third segments, by the fulvous tinted wings and by the longer second abdominal segment.

***Odynerus trichiosomus* n. sp.**

Black, the clypeus, mandibles except the teeth, labrum, a mark over the antennae (broad and transverse above, the lower part of it obliquely roundly

narrowed, the lower half of equal width, half the breadth of the upper), a line on the lower part of the eye incision, a narrow interrupted line on the outer orbits, the pronotum, two small spots on the scutellums, a curved spot narrowed below on the sides of the metanotum above, and the greater part of the abdomen, orange yellow; the yellow on the pronotum and two basal segments of abdomen largely suffused with rufous; the abdomen has the following black markings: the basal slope of first abdominal segment, the black continued down the middle of the segment to shortly beyond its middle, this part being narrowed at the base, widely dilated at the apex, it becoming gradually widened from the base to the apex, a large broad mark on the basal half of the second segment, its basal part extends to the outer edge of the segment, from where it becomes gradually obliquely narrowed to the middle, then obliquely dilated to the apex which is transverse, this apical part not being so wide as the basal; an irregular band on the base of the fifth segment, a broader regular one on the base of the sixth, a narrower more irregular line around its sides and apex, the first ventral segment, a narrow band on the base of the second with a square projection in its middle, and the basal half of the apical segment. Basal three joints of the antennae rufous above, the scape yellow below. Legs reddish yellow, the coxae, trochanters, and base of femora black, the black on the hinder femora longer than on the others. Wings fuscous hyaline, the anterior fulvous in front to the stigma, the costa and stigma fulvous. Male—Length 11 mm. Gallinas Cañon, New Mexico, July. (Osler.)

Entire body covered with long dark fuscous pubescence. The yellow on the pronotum and on the basal two segments of abdomen is suffused with rufous. Clypeus pyriform, slightly but distinctly longer than wide, the apex with a shallow rounded incision. Upper part of head and thorax coarsely punctured, the punctures on the mesopleurae coarser, running into reticulations; the base of the metapleurae finely closely striated, the rest much more coarsely irregularly striated. First abdominal segment cup-shaped, smooth, the second as wide as long, the basal two-thirds smooth, the apical deeply irregularly, but not very closely punctured; the third to sixth are similarly punctured, the punctures becoming gradually smaller, the apices of the segments smooth, not reflexed. Antennal hook black, curved, reaching to the case of the penultimate joint. Base of thorax transverse, the sides not projecting. Postscutellum with a steep slope, its base punctured, the rest smooth, the apex transverse. Sides of metanotum rugose, not margined, the center closely transversely striated, not hollowed; it is almost transverse behind.

This species can only be placed in *Odynerus* sens. str.

***Odynerus approximatus* n. sp.**

Black, the clypeus, mandibles except the teeth, a line fully three times longer than wide and roundly dilated above over the antennae, a broad line bordering the lower part of the eye incision, a short narrow line behind the eyes near the top, a broad spot of equal width behind on the base of the pronotum reaching close to the middle, tegulae, postscutellum, a narrow line on

the top half of the sides of metanotum, an oblique conical mark below the tegulae, lines on the apices of the abdominal segments, an oblique mark touching the apical line on the sides of the first about three times longer than wide, a large irregular oval spot on the sides of the second, and two small spots in the center of the second ventral, pale yellow. Legs pale yellow, the coxae, trochanters and base of femora black above, the black on the fore-femora on the basal third, on the intermediate reaching shortly beyond the middle, on the hinder close to the apex; the tarsi tinged with fulvous. Wings hyaline, tinged with violaceous, the nervures and stigma black. Male—Length 6-7 mm. Fedor, Texas. (Birkmann.)

Antennae stout, becoming thicker towards the apex, the hook brown, reaching to the middle of the penultimate joint. Clypeus slightly longer than wide, the lower half straight, obliquely narrowed, the apex with a shallow rounded incision. Base of thorax almost transverse, the sides not projecting. Apex of postscutellum broadly rounded. Sides of metanotum rounded, not margined. Basal slope of first abdominal segment smooth, the second segment a little wider at the apex than it is long; the apex is more strongly punctured than the rest; it is slightly reflexed. The apical half of the middle femora is dilated laterally and compressed, of irregular form. Puncturation of the head and thorax close and strong; they are covered with white pubescence.

This species is based on three males which agree in form, sculpture, size, and coloration, and in having the middle femora more or less dilated and compressed. The structure of the middle femora is not quite alike in any two of them, though this may not be a point of specific distinction. The two ventral yellow marks may be absent.

***Odynerus mediatu* n. sp.**

Male—Length 6 mm. Three Rivers, California (Culbertson.)

This species agrees in coloration of the body with *O. approximatus*, having also the same form of clypeus and thorax; they may be separated as follows:

- A. Hind femora black except at the extreme apex, the middle femora as seen from the front dilated from near the middle, the apex of the expanded part dilated, with an oblique slope; the middle tibiae becoming gradually widened from the base to the apex; the second abdominal segment distinctly longer than wide, its apex flat, its basal half smooth; the apical weakly punctured except at the apex, where the puncturation is stronger.

*approximatus.*

- AA. Hind femora yellow on the outer side, black below and within, middle femora compressed at the apex, clearly thinner than the basal, the middle tibiae not much thickened at the apex compared with the base, the second segment distinctly punctured throughout, its apex reflexed.

*mediatus.*

The yellow on the legs (especially on the anterior) is largely suffused with rufo-fulvous; the pubescence is dense, white, and silky; the sides of the first



abdominal segment are yellow, as is also the apex; the oblique mark is large and broad, the mark on the sides of the second segment is large, broad, and widest on the outer side; there are two spots on its ventral surface, which are large and oval; the incision on the clypeus is triangular and is deeper and more distinct than in *approximatus*. First abdominal segment cup-shaped, wider than long, almost smooth except at the apex, which is weakly punctured.

The female (from mountains near Claremont, California) has the yellow markings larger, the apex of the second abdominal segment is more deeply punctured, and is distinctly reflexed, the clypeus is slightly broader than long, has the apex depressed and transverse, and has in its center a large transverse oval black spot, the yellow oblique mark on the first abdominal segment is almost enclosed on the outer hinder part, the narrowed black part of the apex being almost continued to the outer edge; as in the male there are two large irregular oval yellow marks.

***Odynerus crassispinus* n. sp.**

Black, the clypeus, mandibles except the teeth, a line about two and a half times longer than wide and of equal width over the antennae, a broad line dilated above on the lower edge of the eye incision, a short line near the top of the outer orbits, an interrupted line of equal width on the base of the thorax, a large conical mark (the wide end above) below the tegulae, tegulae except a large brownish spot on the inner basal part, base of postscutellum, a small oblique longish oval mark on the middle of the first basal abdominal segment, a line on the apex of the first abdominal segment of almost equal width, broad lines extending backwards on the sides to near the base, broad lines on the apices of the second to sixth ventrals and two large oval marks on the second ventral near the outer edges, bright orange yellow. Legs of a paler yellow, the coxae, trochanters, and basal two-thirds of the femora behind, black. Underside of the antennal scape bright yellow, of the flagellum fulvous brown. Wings clear hyaline, the radial cellule clouded, the stigma dark fuscous. Male—Length 7 mm. Claremont, California. (Baker.)

Hind coxae armed at the base with a stout tooth, narrowed towards the apex gradually, and longer than it is wide at the base. Clypeus longer than wide, broad and transverse at the apex. Apex of postscutellum broadly rounded, narrowed. Metanotum with bluntly rounded sides, rough, the middle finely closely obliquely striated. First abdominal segment cup-shaped, smooth, the second as long as it is wide at the apex, its base smooth finely, the apex more strongly punctured and flat; the other segments are finely but distinctly punctured. Pro- and mesopleurae distinctly but not closely punctured, the metapleurae closely roughly obliquely striated. Characteristic of this species are the transverse broad apex of the clypeus, and the stout spine on the hind coxae.

***Odynerus sulciventris* n. sp.**

Red; flagellum narrowly at the base, a large mark square in front obliquely narrowed behind covering the ocelli, the lower part of occiput, a mark dilated at the base on basal half of mesonotum, a narrower longer one down the

sides extending to the apex, a line around the postscutellum, lower edge of propleurae, lower half of mesopleurae, mesosternum, base of metapleurae, the base of the third abdominal segment narrowly, of the fourth more broadly, and the base of the second ventral, black. Wings hyaline, narrowly suffused with fuscous in front, the costa and stigma dark testaceous, the nervures black. Female—Length .12 mm. Nogales, Arizona. (Oslar.)

A broad stout species, sparsely haired and except the basal abdominal segment, closely strongly punctured. Clypeus as broad as long, its apex bluntly rounded. Thorax about twice longer than wide, as wide as the head, the base with the sides rounded, the sides of the apex rounded and rough. Postscutellum projecting over the metanotum, coarsely punctured except on lower apical slope which is perpendicular. Metanotum roundly hollowed, the sides transversely striated. Abdomen long-ovate, as long and as wide as the thorax; the first segment cup-shaped, with a distinct pedicel at the base, as wide as the second which is slightly wider than long, its apex depressed and more strongly punctured than the rest. Mandibles of a paler rufous color than the head, the teeth black. Tegulae rufous, with a large lead-colored spot in the center. There is a distinct oblique depression over each antenna, the lower part of the front being thus gradually narrowed. The base of the second ventral segment is thicker than usual, projecting more downwards, and therefore appearing more clearly separated from the first; there is a distinct furrow down the basal half. The punctured apical depressed part of the second abdominal segment is wide, and broadly roundly dilated backward in the middle.

***Odynerus jeromensis* n. sp.**

Black, the head, thorax and base of abdomen densely covered with a longish pale pile; the clypeus, the greater part of the antennal scape a small mark wider than long and roundly narrowed below over the antennae, postscutellum, a line on the apex of the first abdominal segment dilated laterally, the dilation longer up and down than longitudinally and with the edge of the base ragged, the basal two-thirds of the second segment, the apex not reaching to the outer edge, before it an irregular indentation longest laterally, narrowed inwardly, the base with an irregular edge, the apical boundary narrow and narrowed towards the outer edge, the third and fourth segments except narrowly at the base, the fifth more widely, the line roundly widened at the base, the apical half of the sixth, and the greater part of the ventral surface, lemon yellow. The following parts are black on the ventral segments: the first segment, the base of the second broadly, the line in the middle narrowed gradually and continued to the middle, where it ends in a narrow square projection, the base of the following segments and the basal two-thirds of the last, a short line behind the top of the eyes, a line narrowed in the middle on the base of the thorax rufo-fulvous. Tegulae dark yellowish testaceous, largely fuscous in the middle. Legs rufo-testaceous, the trochanters, the four anterior coxae behind, base of four anterior femora, the hind coxae, and the hind femora broadly, black. Wings hyaline, slightly infuscated, the costa and

stigma rufo-testaceous. Male—Total length 9 mm. Jerome, Arizona. (Oslar.)

Base of thorax almost transverse, the edges bluntly rounded, the sides of the apex rough, not very blunt, the center closely obliquely striated. Apex of postscutellum broad, transverse, first abdominal segment large, cup-shaped, the second clearly longer than it is wide at the apex, where it is strongly punctured and reflexed, the base is slightly narrowed, the third, fourth and fifth segments are closely punctured, the punctures deep and distinctly separated, the apex of the sixth is less strongly punctured. Clypeus slightly longer than wide, the apex depressed, almost transverse. Antennal hook black, reaching to the middle of the tenth joint.

Allied to *O. sapelloensis*, *aqualis*, and *santacfeae* from all of which it may be known by the black mark on the first abdominal segment not being incised laterally in the middle and by there being no yellow mark on the base of the metanotum at the sides.

***Odynerus congressensis* n. sp.**

Ferruginous, the following parts black: a broad oblique line above each antenna, the vertex between the eyes, the fourth and following joints of the antennae, the base and sides of the mesonotum broadly, the parts surrounding the postscutellum, more or less of the center and apex of the metanotum, the edges of mesopleurae, the mesosternum. The following parts are yellow: the clypeus except for a curved rufous line around the center, a line on the apex of the pronotum, a longish oval mark below the tegulae, postscutellum, the apices of the first and second abdominal segments broadly, their sides to near the base still more broadly, the others entirely, and the sides of the metanotum broadly in the female, more narrowly in the male. Legs ferruginous, the tibiae tinged with ferruginous in front. Wings hyaline, largely tinged with violaceous in front; the costa and stigma fulvous, the other nervures black. The pubescence is dense and pale. Female and male—Length 13 mm. Congress and Prescott, Arizona. (Oslar.)

Clypeus as long as wide, its apex broad, transverse; it is strongly but not closely punctured. Mandibles rufous, the teeth black. Apex of postscutellum broadly rounded, rugosely punctured. Base of thorax transverse, the sides not projecting; the thorax is more than twice longer than wide. First abdominal segment cup-shaped, smooth, the second if anything longer than wide, smooth except at the apex which is strongly but not very closely punctured, and not reflexed; the third, fourth, and fifth similarly punctured, the last smooth, the same parts of the ventral surface are more weakly punctured.

The male is similarly colored except that the sides of the metanotum are not broadly yellow, the front is yellow, not rufous, the clypeus is broad as in the female, but the apex is not quite transverse. The antennal scape below, the mandibles, the tibiae, and to a less extent, the tarsi, are yellow. Probably the amount of yellow varies in both sexes. The puncturation is strong, and is sparser on the center of the mesonotum.

Allied apparently to *O. ductus* Cr. It is more slenderly built than *arvensis* or *annulatus*, to both of which it is related.

**Odynerus (?) tanynotus n. sp.**

Reddish; the greater part of the first and the sides of the other abdominal segments broadly, the apical two-thirds of the scutellum, and its lateral keels, yellow. The fifth and following joints of the antennae, a large irregular mark in the center of the vertex from which two broad lines run down to the antennae, the mesonotum except for a broad V-shaped mark in the middle, the base and apex of the scutellum, of the postscutellum more narrowly, breasts, base of metapleurae broadly, a large semicircular mark on the apex of the metanotum, and a broad band on the apex of the second abdominal segment, black. Legs rufous, of a brighter tint than the body. Wings fuscous-violaceous, the costa and stigma dark fulvous, the nervures black. Female—Length 11 mm. Congress, Arizona. (Oslar.)

Thorax somewhat more than twice longer than wide, rounded laterally behind, transverse at the base, the base of metanotum with a wide shallow furrow on the middle, the apex hollowed. Apex of postscutellum broadly rounded. Head cubical, fully wider than the thorax, the temples broad, slightly rounded, not narrowed, the apex transverse. Clypeus pyriform, broadly rounded above, gradually narrowed towards the apex which is transverse. The head is longer than usual viewed from the sides or front; it is closely strongly punctured, the rufous mark on the front is obliquely narrowed above and below, the lower part being longer and narrower than the upper. Thorax closely strongly punctured, more closely rugosely above than on the pleurae where the punctures are much more clearly separated. The sides of the metanotum project into pale colored horny plates, narrowed broadly in the middle. The first abdominal segment is elongated bell-shaped, roundly narrowed at the base which is more rugosely punctured than the rest; it is about one-half longer than it is wide at the apex, and is of equal width from the top of the narrowed part, and it is longer than the second, which is slightly but distinctly longer than broad, not narrowed at the apex; its apex and that of the third are slightly reflexed. All the segments are closely strongly punctured, but not so strongly as the thorax. The abdomen is not much longer than the thorax.

A distinct species from its coloration, large cubical head, long thorax compared with its width, and long bell-shaped first abdominal segment. The wings are placed shortly beyond the middle, the fore part of the thorax being thus longer than the posterior. There is no transverse keel on the base of the first abdominal segment, which is, however, roughened as in many of the Section *Ancistrocerus*, but not in *Odynerus* sens. str.

**Odynerus leucospilus u. sp.**

Black, shining, covered with a white down, dense and silvery on the clypeus; the clypeus except for a line down the center and a broad one across the apex, a narrow line on the lower part of the eye incision, a line on the base of the thorax, the lateral widened part incised at the apex, tegulae except for a black spot, a mark of almost equal width below them, two spots on the apex of scutellum, the postscutellum, a mark on the lower edge of apex of meta-



notum, lines on the apices of the basal five abdominal segments, that on the first trilobate, the middle lobe smaller than the lateral, and an oblique spot gradually narrowed on the outside, white. Underside of antennae rufous brown, the hook small, not extending beyond the base of the joint. Legs bright red, the coxae, trochanters, and base of anterior femora broadly, of posteriorly more narrowly, black. The anterior femora behind, and the tibiae behind, white. Wings hyaline, the radial cellule smoky, the costa testaceous, the nervures black. Male—Length 10 mm. Prescott, Arizona. (Osler.)

Clypeus longer than wide, its apex rather broad, bluntly rounded, narrowly rufous. Thorax about twice longer than wide, the base transverse, the apex broadly rounded laterally, the center hollowed, the whole strongly but not closely punctured. The first abdominal segment is nearly as long as the second, the basal half becoming gradually widened from the base, almost impunctate, shining, the apical part rather strongly punctured, the following four segments more strongly and closely punctured, the second as wide as long, distinctly roundly narrowed at the base, its apex not reflexed, the last smooth and bluntly rounded.